CERTIFICATE

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"Comparison of the effect of combined open and closed knee chain exercises with and without mobile applications on pain, disability and functional abilities of women with patellofemoral pain syndrome."

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Mohadeseh Babazadeh

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Dr. Zahra Salman
Congress President

14th International Congress on Sport Sciences

Dr. Hossein Zareian
General Chair

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پذیرفته شده برای پوستر

شناسه دیجیتال (DOI): 10.22089/SSRC.2024.4529

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چکیده

Abstract

Background: In recent years, scientific research has focused on utilizing emerging technologies to alleviate disease symptoms and enhance the quality of life. The widespread acceptance of Tele-Rehabilitation (TR) through mobile applications following the onset of the COVID-19 pandemic indicates its potential in healthcare.

Aim: This study aimed to compare the impact of a six-week combined open and closed-chain knee exercise protocol, with and without the use of a mobile application, on pain, disability, and functional screening test scores, and single-leg squat performance in women diagnosed with patellofemoral pain syndrome.

Materials and Methods: The research included 34 female subjects aged 18 to 25 years who met the inclusion criteria. This study used a semi-experimental applied research approach. The study participants were randomly assigned into two groups: one performing combined open and closed knee exercises with a mobile application, and the other without the use of a mobile application. Participants underwent in-person and virtual training sessions for pre-test and post-test (after 6 week) assessments.

This research rigorously scrutinized key outcome measures including pain, disability, and functional outcomes. Thorough assessments were conducted using: the Visual Analogue Scale (VAS) for precise pain evaluation. The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) for symptoms and physical

disability assessment, and The Functional Movement Screen (FMS) for a comprehensive analysis of overall functional outcomes.

Descriptive and inferential statistics, including mixed ANOVA ($P<0.05$), were used for data analysis.

Results: The findings indicated no significant between groups differences- in the effect of combined open and closed knee exercises with and without a mobile application on pain, disability, and functional screening test scores ($P<0.05$). However, there were significant within-group differnces in both exercise groups in the impact of in abovemented outocmes following 6 weeks exercise programs ($P<0.05$).

Conclusion: Overall, participants in both exercise groups experienced reduced pain and disability, as well as improved performance patterns during the post-test session compared to the pre-test. The results suggest that the exercises studied may enhance the performance of women with patellofemoral pain syndrome and contribute to preventing this complication.

کلیدواژه ها به انگلیسی

CKC; Disability; functional ability; Mobile application; OKC; Pain; and PFPS

نوع پذیرش

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موضوعات

Sports Biomechanics (1)

جستجو

بیاب

جستجوی پیشرفته

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